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13MCA22

Second Semester MCA Degree Examination, Dec.2014/Jan.2015

Object Oriented Programming using C++

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. What is object oriented programming? Explain the concepts of object oriented programming. (10 Marks)
b. Define constant, volatile and reference variable explain their use in programming and give a code example. (10 Marks)
- 2 a. What is function overloading? List its advantages and disadvantages using a code example. (10 Marks)
b. Write a program using function templates to swap contents of two variables. Write a main program to demonstrate swapping of 2 character data and also 2 integer data. (10 Marks)
- 3 a. Explain difference between static data members and non – static data members. Write a code example to support the above concept. (10 Marks)
b. Define and explain the uses of default constructor, parameterized constructor and destructor in program. Support with a code example. (10 Marks)
- 4 a. What are friend functions and friend classes? Explain and give a code example for each. (10 Marks)
b. Make use of template classes to implement stack operations. Once stack class is created. Create a stack of char type and of double type and call operations. (10 Marks)
- 5 a. Demonstrate with code example, how “protected” keyword works when inheritance is involved in different scenarios. (10 Marks)
b. Explain the order of constructor and destructor called in multiple level inheritance with code example and also its output. (10 Marks)
- 6 a. What are virtual functions? Explain how they work, with code example. (10 Marks)
b. Define and explain what are pure virtual functions and abstract classes. Give a code example for each. (10 Marks)
- a. Write a program to show how input operator and output operator can be overloaded and used. (10 Marks)
b. Write a short notes on atleast 6 manipulations used for input/output operations. (10 Marks)
- 8 a. What are the important keywords used in exception handling. Explain and use it in code example. (10 Marks)
b. Explain how can one catch all exceptions, restrict exceptions and re-throw exceptions use all these concepts in an example. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.